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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,260	02/06/2007	Raymond G. Roth	PAT 53988W-2	4571
26123 7590 12/05/2008 BORDEN LADNER GERVAIS LLP Anne Kinsman WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA			EXAMINER BOMAR, THOMAS S	
			ART UNIT 3676	PAPER NUMBER
			NOTIFICATION DATE 12/05/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/596,260	<b>Applicant(s)</b> ROTH ET AL.	
	<b>Examiner</b> Shane Bomar	<b>Art Unit</b> 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 54. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The use of the trademark TEFLON has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17, 18, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 17 recites the limitation "said steel support" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claim 18 depends from this indefinite claim.

6. Claim 21 uses the trademark TEFLON as a limitation. The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. In fact, the value of a trademark would be lost to the extent that it became descriptive of a product, rather than used as an identification of a source or origin of a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name (MPEP 2173.05(u); Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982)).

***Claim Objections***

7. Claims 5, 7, and 12 are objected to because of the following informalities:
- a. in claim 5, the recitation of "said circumference" should be --a circumference--, and the recitation of "the circumference" should be --a circumference--;
  - b. in claim 7, the recitation of "said steel connect" lacks proper antecedent basis, although it appears that the claim should depend from claim 6;

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c. in claim 12, the recitation of “a first end” and “a second end” in lines 8-9 appears to be redundant since the same information seems to already be in lines 5-6.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6 and 8-15 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,894,402 of Cherrington (also cited by Applicant).

Regarding claim 1, Cherrington discloses a pullhead/reamer 30 for a directional drilling process comprising: a first end for mating with a mandrel 20; a second end; a set of struts (unlabeled but clearly visible in figure 3), connecting said first and said second ends, defining a plurality of open ports therebetween as it appears that the reamer is open between the struts (Fig. 3), said set of struts comprising a set of teeth 42 on its outer surface for displacing ground during said directional drilling process; and a set of slurry jets emerging from the end of the mandrel 20, for receiving and distributing a drilling fluid 60 during said directional drilling process (Fig. 4).

Regarding claims 2 and 3, teeth 42 are on the first and second ends for displacing ground (Figs. 3 and 4).

Regarding claim 4, it is inherent that the first end is connected to the mandrel 20 with screw means as is notoriously known in the art.

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Regarding claim 5, a circumference of said first end is smaller than a circumference of said second end (Fig. 3).

Regarding claim 8, the second end is attached to a pipe 32 (Figs. 3 and 4).

Regarding claims 9 and 10, Cherrington discloses a method of directional drilling to produce an underground hole for laying of a pipe 32 comprising the steps of: rotating a pullhead 30 to displace mud to produce said underground hole; mixing said mud with a drilling fluid 60 to create a slurry 68; guiding said slurry to an interior of said pipe causing said slurry to travel along said interior of said pipe to an opposite end of said pipe through pipe 62 to be removed therethrough (Fig. 4; col. 4, line 55 through col. 5, line 2).

Regarding claim 11, the slurry is pressurized to enter the pullhead, and it is funneled toward the pipe by holes 66 (Fig. 4; col. 5, lines 3-21).

Regarding claim 12, the embodiment of figures 3 and 4 disclose every limitation of claim 12, as seen in claim 1 above, with the exception of a motor. However, figure 5 discloses a motor in connection with an apparatus for directional drilling as disclosed in figures 3 and 4 (col. 5, lines 35-55).

Regarding claims 13 and 14, there is a reservoir and pump 38 for delivering the drilling fluid, which is notoriously known in the art to contain bentonite (Fig. 2).

Regarding claims 6 and 15, the embodiment of figure 5 discloses all of the limitations of claims 1 and 12, wherein it is further disclosed that the second end is attached to a steel connect 80.

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***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 7 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cherrington in view of US 5,687,805 of Perry.

Cherrington teaches the apparatus of claims 6 and 15 above, with the exception of bearings/means for reducing wear between a steel connect and the mandrel.

Perry teaches an apparatus very similar to that of Cherrington, wherein it is further taught that a set of bearings 62 and associated supports attach a steel connect 54 to a mandrel for reducing wear and tear therebetween, wherein it is further taught that slots are provided in the second end 48 for receiving the steel connect 54 (Figs. 5 and 6). Thus, all of the claimed elements were known in the prior art and one skilled in the art could have combined the bearings and steel connect of Perry with the apparatus of Cherrington as claimed by known methods with

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no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill.

***Conclusion***

13. The prior art made of record on form 892 and not relied upon is considered pertinent to applicant's disclosure. Riesing teaches a TEFLON bearing.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is (571)272-7026. The examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shane Bomar/  
Primary Examiner, Art Unit 3676